MONTHLY PROGRESS REPORT

Contractor Name:
University of Notre Dame (Michael Lemmon)

Contractor Address:
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Contract/Purchase Order No.	Task Order No.
W9132T-10-C-0008 (prime contract no.)	

Project Title:
Design and Simulation of Intelligent Control Architecture for Military Microgrids

Period Covered:
July 1 2010 – August 1, 2010

POC/COR (Reference Paragraph 5 of the SOW):

Achievements (Describe by task. Add additional tasks, if needed.):
task numbers refer to tasks in Odyssian's original contract

Task II: Model and Simulate Intelligent Microgrid

1) Completed preliminary simPower modeling blocks for UWM inverter and inverter controlled ideal generator, diesel generator, and battery storage.
2) Began testing of simPower blocks and microgrid simulation.
3) Preliminary simulation results shown to Odyssian on July 30th, 2010

Task III: Distributed Control Algorithm Development

1) Completed design of event-triggered dispatch algorithm.
2) Presentation of event-triggered dispatch paper at 2010 American Control Conference
P. Wan and M.D. Lemmon, Optimal power flow in microgrids using event-triggered optimization, American Control Conference, Baltimore, USA, Jun 29-July2, 2010

Task VI: Develop Wireless Communication

No achievements this month.

Task VII: Develop Wireless Distributed Control

No achievements this month

Problems Encountered (Describe by task. Add additional tasks, if needed):

Task II: None

Task III: None

Task VI: None
Task VII: None
Open Items (List items that require action by the Contractor or the Government):s No open items
Summary Assessment and Forecast (Provide an overall assessment of the work and a forecast of contract completion): The objective for this reporting period was to translate earlier simulation models for the CERTS inverter into simPower blocks. This objective has been completed and preliminary models for inverter controlled battery storage and diesel generators have been built. The work planned for the next reporting period will build a simPower simulation of the UWM mesh microgrid that was provided by UWM at the February 2009 project meeting. Notre Dame's year 1 tasks are all on track for timely completion.